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Social stratification and attitudes: a comparative analysis of the effects of class and education in Europe[1]

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Abstract

A classic topic in the sociology of inequality lies in the subjective consequences of people's stratification position. Many studies have shown that education and occupational class have significant effects on attitudes, but little is known about how the magnitude of these effects depends on the societal context. There has been debate in the scholarly literature, with some authors arguing that effects of class and education are less important when societies are more developed, whereas other authors argue that effects are either stable (for class) or increasing (for education). We use a meta-analytical design to address this debate. More specifically we examine the effects of class and education for a broad range of attitudes (21 scales) in 22 European countries using data from the 1999 wave of the *European Values Study*. We pool summary-measures of association (Eta-values) into a new dataset and analyse these Eta-values (N = 453) applying multilevel models with characteristics of countries and characteristics of attitudes as the independent variables. Our results show that there is no evidence that the effects of class on attitudes are lower when countries are more modern, but we do find larger effects of education in more modern countries.

Keywords: Class; education; attitudes; (post)modernization; individualization

Introduction

There is a long tradition of research on the link between stratification and attitudes (e.g. Davis 1982; Hyman and Wright 1979; Lipset [1959] 1981; Stouffer 1955; Svallfors 2005; Weakliem 2002). Few studies, however, have analysed this link from a comparative cross-national perspective. In this paper, we compare stratification effects on attitudes across a large number of countries. Our underlying question is whether traditional demarcations have persisted in

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modern societies or whether attitudes have become 'individualized'. In work on individualism and massification (Beck and Beck-Gernsheim 2002), as well as in recent criticisms of the stratification and class literature (Pakulski and Waters 1996), it has been argued that a person's social position in society has become less relevant in the development of lifestyles and values. Differences still exist between individuals, but such differences are no longer shaped by traditional hierarchical lines in society. Instead, attitudes are increasingly believed to be 'chosen.' Responsible for this shift is a weakening of traditional socializing institutions in combination with greater individual autonomy in general. On the basis of this, one would expect that the effects of class and education on attitudes are weaker in highly modernized countries than in less modernized countries.

An alternative argument is that stratification itself is still important, but that there has been a shift from an economic to a cultural basis of stratification. In this line of reasoning, the transition to a modern society has led to a decline in the importance of economic resources for lifestyles and life chances. At the same time, cultural resources, such as cognitive abilities and knowledge, would have become increasingly important. This notion can be found in several theoretical works, including Bell's work on the post-industrial or knowledge society (Bell [1973] 1976), Bourdieu's work on cultural capital (Bourdieu [1979] 1984), and theories of the new class (Brint 1984; Gouldner 1979). What all these perspectives have in common is that they emphasize the emergence of knowledge and cognitive skills as a resource in the stratification system. On the basis of this, one would expect that the effects of education on attitudes are stronger in more highly modernized countries than in less modernized countries, much in contrast to what the individualistic perspective suggests.

For the effects of class on attitudes, counter arguments have also been presented. The individualistic thesis arguing for a decline in stratification effects on attitudes has been formulated especially strongly for the case of class (Pakulski and Waters 1996). In this perspective, it has been argued that values, lifestyles and consumption themselves have become sources of social identity, rather than the underlying structural factors such as class. People do not identify themselves in terms of class anymore, so the reasoning goes, and most ethical and moral issues cannot be understood in terms of class or class interests (Pakulski and Waters 1996; Waters 1991). Defenders of class have argued that the empirical evidence for these individualistic claims is weak at best (Evans 1993; Goldthorpe and Marshall 1992; Hout, Brooks, and Manza 1993). In the words of Goldthorpe and Marshall, 'What is revealed is a remarkable persistence of class-linked inequalities and class-differentiated patterns of social action, even within periods of rapid change at the level of economic structure, social institutions, and political conjunctures' (Goldthorpe and Marshall 1992: 393). In this view, effects of class on values will be stable, both across time and across countries.

To summarize, there are three partly competing hypotheses about the link between stratification and attitudes: (a) the more modern a country is, the weaker the effects of education and class on attitudes; (b) the more modern a country is, the stronger the effect of education on attitudes and the weaker the effect of class; and (c) the effect of class on attitudes does not depend on the degree of modernization of a country. To test these hypotheses, we analyse the influence of class and education on 21 attitudes in 22 European countries. We compare the effects of class and education across countries in order to assess if and how the level of (post)modernization affects the strength and type of stratification of attitudes. Countries in Europe differ in their level of economic development so that a comparison of European countries yields a meaningful test of the competing macro-level perspectives. Austria, Germany, Denmark, Britain and The Netherlands are typically rich European countries, whereas Latvia, Portugal, Poland and Estonia are among the poorer countries. Differences between countries at one point in time are obviously not the same as changes over time but we believe that the two research designs (comparisons among countries and comparisons over time) both yield a valuable test of the notion that economic and cultural developments may have changed the nature of stratification in a society.

Contribution to previous research

Both classic and contemporary research shows strong and enduring effects of education on a wide range of attitudes. For example, the higher educated are more liberal on moral issues, more tolerant toward outgroups, less strongly attached to traditional religious values, and more postmaterialistic in their orientation than the lower educated (Davis 1982; DiMaggio, Evans, and Bryson 1996; Evans 1997; Hyman and Wright 1979; Jackman and Muha 1984; Kraaykamp 2002; Pascarella and Terenzini 1991; Phelan et al. 1995; Sieben and De Graaf 2004; Stouffer 1955; Weakliem 2002).

The reasons for educational effects have been debated (Hyman and Wright 1979; Pascarella and Terenzini 1991). One argument is that institutions of higher education transmit values to students directly and such values are often egalitarian or liberal. Another argument is that having followed schooling at a higher level increases a person's breadth of perspective which can reduce intolerance and lead to support for 'new' values. Selection effects play a role as well, however, since the educational system in part selects on the basis of cognitive abilities. Although cognitive abilities do not affect attitudes directly, they may do so indirectly. People with more cognitive abilities may be better able to deal with complex issues and can have a more balanced view on matters. Finally, some authors claim that the higher educated tend to answer

questions in surveys in a socially desirable manner, leading to an above average support for tolerance and liberalism on social issues among the higher educated (Jackman and Muha 1984).

Class differences in attitudes have been documented particularly well in the political realm (Evans 1993; Lipset [1959] 1981). Numerous studies have shown that the working class is more supportive of left-wing parties than the middle class, although this pattern of 'class voting' has diminished over time (De Graaf, Nieuwbeerta, and Heath 1995; Manza, Hout, and Brooks 1995). Related to this is the finding that the working class is more egalitarian in its attitudes toward economic issues than the middle class (Van de Werfhorst and De Graaf 2004; Wright 1985). Class also appears to affect issues outside of the economic and political domain, however (Lamont 1992; Svallfors 2005). In their studies of child-rearing values, for example, Kohn and his colleagues have shown that the working class is more strongly oriented toward obedience and conformism than the middle class (Kohn 1977).

Several theoretical arguments have been given as to why class affects attitudes. The most important argument is that classes differ in the economic interests they have and that the attitudes class members hold are a reflection of those interests (Goldthorpe et al. 1969; Wright 1985). This not only explains left-wing voting, but also intolerance toward outgroups. Blue-collar workers may be more prejudiced against immigrants, for example, because they feel more threatened by them economically (Coenders et al. 2004). Class also affects attitudes because classes may function as social groups. Social interaction occurs most often within rather than between classes (Chan and Goldthorpe 2004; Kalmijn 1994; Laumann 1966; Wright and Cho 1992), which implies that certain attitudes or lifestyles may be reinforced within a class. The social nature of classes may also lead to attitude differences between classes because people can distinguish themselves from another class by expressing different values (Lamont 1992). Finally, classes may have their own values because they share specific job characteristics and work experiences, resulting in what has been called local occupational cultures (Grusky 1998; Kohn 1977).

Previous studies mostly focus on either education or class. Fewer studies have compared the relative importance of class and education in one study. This is an important issue, because although class and education are related empirically, their effects on attitudes and lifestyles have different theoretical meanings. In his classic study on working-class authoritarianism, Lipset analysed class and education simultaneously and concluded that 'the increases in tolerance associated with higher educational levels are greater than those related to higher occupational level' (Lipset [1959] 1981: 101–2)). A later and more comprehensive analysis was done by Davis in his analysis of forty-nine items in the General Social Surveys of 1972–1980 (Davis 1982). Davis showed that educational effects were not only stronger on average than the effects of occupational position but also that occupational effects were limited to specific

attitudes (i.e., job related attitudes) whereas educational effects occurred for a broad variety of attitudes. Recent studies analysing a smaller set of attitudes come to more or less the same conclusions (Svallfors 2005; Van de Werfhorst and De Graaf 2004).

In our study, we are also interested in the relative importance of education and class but we introduce a comparative perspective to this problem. Although the comparative perspective in studying the link between stratification and attitudes is not new, there are several gaps in this literature. We try to make progress in three ways. First, we analyse a variety of attitudes by developing 21 scales out of the third wave of the European Values Study [EVS]. This wave was held in 1999 and 2000. Most previous studies – with the exception of Davis (1982) – have generally focused on specific types of attitudes. Because the relative importance of class and education may well depend on the type of attitude under consideration (Van de Werfhorst and De Graaf 2004), it is important to have as broad a range of attitudes as possible. In other words, to formulate general conclusions about the link between stratification and attitudes, one not only needs a large and representative sample of respondents, one also needs a broad range of attitudes.

Second, we analyse this large number of attitudes for a larger number of countries than previous studies have done. Svallfors compares the effect of class and education on attitudes toward conformism in four Western countries and finds no systematic differences between the countries (Svallfors 2005). Other macro-level studies have analysed class or educational effects in more countries, but have focused on specific issues such as postmaterialism (Inglehart 1990), political opinions (Weakliem 2002), ethnic prejudice (Hello, Scheepers, and Gijsberts 2002), sex-role attitudes (Knudsen and Waerness 2001), and attitudes about social security (Scheepers and Te Grotenhuis 2005).

Third, we contribute to the macro-sociological study of attitudes. This macro-literature has been guided by notions of modernization and generally finds strong evidence for cross-country differences (Arts, Hagenaars, and Halman 2003; Inglehart 1990; Inglehart and Baker 2000). Although these studies also pay attention to individual differences in attitudes, differences between countries are usually based on comparisons of the average population. Few studies in this perspective compare micro-level effects on attitudes across countries. In this paper, we also examine processes of modernization but we focus on how internal country differences vary across countries than on how averages vary across countries.

To achieve these goals, we introduce a rather new design for the comparative study of attitudes. More specifically, we use a meta-analytical approach (Hedges and Olkin 1985; Wolf 1986) in which the associations between education (or class) and attitudes are the observations in a multilevel analysis in which characteristics of countries and characteristics of attitudes are the

independent variables. Most important is that in this design, effects of country-characteristics are estimated more convincingly because we look at multiple attitudes per country. Similarly, differences between attitudes are examined systematically because we observe each attitude in several countries.

Data and measures

Data

We use data from the 1999–2000 wave of the European Values Study (Halman 2001). From these data, we select a subset of the 22 countries that today belong to the European Union. We focus on a subset of men and women of ages 21 through 64. For retirees, we have limited occupational data, which is the reason why we focus on the working-age population. We include the unemployed as a separate class category because their attitudes may be different, especially on economic issues. People who are out of the labour force (housewives and people on disability pensions) are not included. Because this group largely consists of women, we do not want to treat it as a separate category in the class variable. This would mix up class and gender effects. The number of cases per country is about 700 on average and the total number of cases in our analyses is close to 16,000.

Independent variables at the individual level

Education was coded in the EVS-data into a common variable containing eight categories. To have sufficient numbers of cases in each category, we recoded this into four categories that can be compared across countries. The categories are: (a) primary, (b) secondary vocational, (c) secondary general, (d) tertiary. In the public use EVS-1999 data files, the category of secondary vocational schooling in Germany was combined with general secondary schooling. To check if this affected the results, we calculated regression models without Germany but this did not change the results.

The class variable is based on the *current* occupation of the respondent. Respondents reported their detailed occupation and these were subsequently coded into the EVS-1999 class scheme by the researchers. As discussed above, we include the unemployed but we exclude people who are not in the labour force. The original coding is as follows: (1) employer/manager of establishment with 10 or more employees, (2) employer/manager of establishment with less than 10 employees, (3) professional worker (lawyer, accountant, teacher), (4) middle level non-manual/office worker, (5) junior level non-manual/office worker, (6) foreman and supervisor, (7) skilled manual worker, (8) semi-skilled manual worker, (9) unskilled manual worker, (10) farmer: employer, manager

or own account, (11) agricultural worker, (12) unemployed. Because of sample size considerations, we recoded this into the following seven categories: (a) managers and employers (1 and 2), (b) professionals (3), (c) lower white-collar (4 and 5), (d) higher blue-collar (6 and 7), (e) lower blue-collar (8, 9, and 11), (f) farmer (10), (g) unemployed (12). This class categorization is only slightly different from the commonly used EGP-scheme. Within the higher white-collar category we distinguished the more economically-oriented managers from the more culturally-oriented professionals (Brint 1984). Farmers are a small group in most countries, but their position can still be assessed for Europe as a whole. Moreover, their position is special, so that it is difficult to combine them with other class categories. For country-specific analyses, however the farmers need to be excluded.

Dependent variables

In our treatment of attitudes, we benefit from the design of the EVS, which was constructed to cover as broad a range of attitudes as possible. We used a total of 83 items to construct 21 scales, each of which refers to a specific attitude. The general strategy was to consider groups of items that were intended by the original designers of the survey as a scale. Subsequently, we performed a confirmatory factor analysis on the chosen items in a group. This factor analysis was done for three reasons: (a) to remove items with low factor scores (loadings below 0.50), (b) to assess whether more than one dimension was involved in the items, and (c) to obtain weights for creating the scale. If more than one dimension was involved, more than one scale was created. This was done only for items on extrinsic and intrinsic work motivation and for items on political tolerance and tolerance of deviance. Details of this procedure can be found in the appendix. The appendix also contains all the items.

All scales are constructed by first standardizing items and then summing the items, using factor scores as weights. For single-item scales and for postmaterialism, no factor analysis was necessary. We standardized all resulting scales so that their means have an intuitive interpretation (z-scores). All standardization procedures were done for the European sample as a whole.

Previous research on EVS-data has generally tried to find a few dimensions behind the diversity of the scales in the survey. This has typically resulted in a second-order factor analyses of the 20 to 30 scales in the data, leading to two or three underlying value dimensions (Arts, Hagenaars, and Halman 2003; Inglehart and Baker 2000). Our strategy is rather different. In the stratification literature we find several studies which focus on different types of attitudes. A comparison of the effects of stratification variables for different types of attitudes however remains scarce. For that reason, we keep the 21 scales as separate scales in the data.

Individual control variables

We include several individual variables as controls: sex, age (in categories), children (never had children, children at home, ever had children but none at home), living with a partner (married or unmarried), living with parents, and degree of urbanization of the current residence (i.e. log of the number of inhabitants). We do not include religiosity or church membership as an independent variable since we regard this as part of a person's value orientation. Measures of religiosity are dependent variables.

Design

We introduce a meta-analytic design to the comparative study of attitudes. Our first aim is to summarize the effects of education and the effects of class. Hence, we first need to choose a measure of association. A summary measure that is often used in meta-analyses is Eta, which is the amount of variance that can be explained by a certain variable. It is an attractive measure in our study because the effects of class may not always be linear. If effects are linear, a Pearsonian correlation measure would produce the same outcome as an Eta value.[2] Because we want to control for other variables before we summarize the class or education effect, we present so-called partial Eta's, which are defined as

$$SS_{factor} / (SS_{factor} + SS_{residual}),$$

where SS is the sum of squares (Pierce, Block, and Aguinis 2004). Partial Eta's are obtained from a multivariate ANOVA analysis.

For both class and education, we use two sets of Eta-values. The first set of Eta-values – what we call *total* Eta-values – are not adjusted for the 'other' stratification characteristic (either education or class), although they are adjusted for sex, age, children, partner status, living at home, and urban residence. The second set of Eta-values – what we call *net* Eta-values – are also adjusted for the 'other' stratification characteristic. For comparative purposes, we also present partial Eta-values for the effects of age, sex, and country.

We conducted an ANOVA for each attitude in each country. This results in 21 attitudes $\times$ 22 countries = 462 possible ANOVA models. Not all scales are present in all countries so that the actual number of models is 453. Subsequently, we used these Eta-values as observations in a separate regression analysis. This separate regression model is a multilevel model where Eta-values are nested within countries. The independent variables in this kind of macro-analyses are characteristics of countries and characteristics of attitudes. Effects of country characteristics allow us to assess how attitude stratification differs across countries, effects of attitude characteristics allow us to assess how attitude stratification differs across types of attitudes.

We primarily focus on two aggregate level country-variables as indicators of (post)modernization: (a) the GNP per capita, (b) the percentage of the working population in the service sector. GNP is an economic indicator of modernization, whereas the expansion of the service sector may capture aspects of what has been called postmodernization (Inglehart and Baker 2000). The various aspects of development are highly correlated so little would be gained by including additional measures (Weakliem 2002). We include two control variables at the country level. The first variable indicates whether the country is a formerly communist country. The communist variable is included because several arguments suggest that attitude differentiation is different in (formerly) communist countries. Some authors have argued that the transition from communism to capitalism has gone hand in hand with growing ideological uncertainty, supposedly leading to more heterogeneity in attitudes and weaker class and educational effects (Arts, Hagenaars, and Halman 2003; Hello, Scheepers, and Gijsberts 2002). Other authors have argued that cultural aspects of stratification are especially prominent under communism, and this may result in stronger rather than weaker educational effects on attitudes in communist societies (e.g. Konrád and Szelényi 1979). Such patterns can persist after the transition to capitalism. The second variable is a country's religious composition which is measured as the percentage of respondents who attend church at least monthly. This information is an aggregation from the individual-level EVS data. In Table I, we present the macro-characteristics for each country.

To assess effects of attitude characteristics, we classified the 21 scales into six groups: (a) attitudes towards moral issues (i.e., issues pertaining to private forms of behaviour), (b) attitudes towards religious issues (i.e., beliefs in God and religious concepts), (c) attitudes towards political-economic issues (i.e., issues about government intervention in the economy), (d) attitudes toward ethnic issues (i.e., how people think of immigrants and ethnic groups), (e) attitudes toward work (i.e., how people think about the importance of paid work), (f) attitudes toward civic issues (i.e., what people think of the functioning of democracy).

In the multilevel analysis we include five dummy-variables indicating to which attitude type a specific Eta-value pertains (the reference category is moral issues). The effects of these variables tell us for which dimension the class or education effect is strongest. For example, one would expect that class is more important for political-economic issues than for others. Similarly, we expect that education is more important for moral and ethnic issues than for political-economic issues. The regression model allows us to test such notions statistically.

As an additional control variable, we include a measure of scale quality in the analysis: the number of items that is used in a scale (recoded in 3+ items versus 1–2 items). We expect that the Eta-values will be greater when scale

TABLE I: *Country characteristics: Means for the European Union*

	GNP per capita in 1998 (in 1000s)	Service sector in 1999 (%)	Former communist	Church attendance (% monthly)
Countries				
France	21.2	70.7	0	12
Great Britain	20.3	72.6	0	39
Germany	22.0	63.8	0	24
Austria	23.1	63.5	0	43
Italy	20.4	62.2	0	53
Spain	16.0	62.0	0	36
Portugal	14.6	53.0	0	53
Netherlands	22.3	75.6	0	25
Belgium	23.6	71.4	0	27
Denmark	23.9	70.6	0	12
Sweden	19.8	72.3	0	9
Finland	20.6	66.3	0	12
Ireland	18.0	63.1	0	74
Estonia	7.6	59.8	1	11
Latvia	5.8	57.6	1	15
Lithuania	6.3	53.4	1	28
Poland	7.5	50.6	1	78
Czech republic	12.2	54.7	1	13
Slovakia	9.6	54.2	1	50
Hungary	9.8	58.9	1	18
Malta	14.3	68.9	0	87
Slovenia	14.4	51.5	1	30
Means	15.4	61.4	0.36	34

Sources: World Bank (GNP), ILO Labour Statistics (agricultural and service sector), EVS studies (religion). GNP refers to the purchasing power parity GNP.

measurement is more reliable. We also considered weighting the observations, using the sample sizes of the country-specific analyses. It can be argued that Eta-values from larger samples should gain more weight in the aggregate-level analysis than Eta-values from smaller samples. We replicated our models using weighted regression models, but the results were highly similar so that we abstain from weighting the observations.

Analyses

We first present an analysis of Europe as a whole. In this analysis, we present mean values for all the 21 attitudes by categories of class (Table II) and by categories of education (Table III). In Table IV we summarize this information using measures of association (Eta-values). This part of the analyses allows us to compare the role of class and education directly. In the second part, we present the multilevel analyses in which country- and attitude-specific Eta-values are pooled into an aggregate level dataset (Table V). These models allow us to test our macro-level hypotheses.

TABLE II: *MCA analysis of differences in attitudes between social classes: Adjusted means for the European Union in 1999*

	Managers/ employers	Professionals	Lower white-collar	Higher blue-collar	Lower blue-collar	Farmers	Unemployed	F-test
Moral issues								
Intolerance of deviance	0.03	0.11	0.03	–0.01	–0.02	–0.07	0.01	4.5*
Egalitarian sex roles	–0.02	0.24	0.09	–0.06	–0.16	–0.20	–0.13	42.6*
Pro-life attitudes (anti abortion)	–0.06	–0.01	–0.03	–0.02	0.07	0.25	0.04	6.9*
Pro-marriage attitudes	–0.05	–0.20	–0.07	0.07	0.18	0.29	0.05	37.7*
Pro-euthanasia attitudes	0.04	0.05	0.01	0.02	–0.05	–0.24	–0.05	5.7*
Liberal attitudes toward soft drugs	0.02	0.15	0.04	–0.07	–0.07	–0.16	–0.01	14.2*
Religious issues								
Religious beliefs	–0.01	–0.08	–0.01	0.00	0.05	0.30	–0.02	8.4*
Separation church and state	0.00	0.07	0.03	–0.03	–0.09	–0.18	–0.01	6.7*
Political-economic issues								
Pro-environmentalism	0.06	0.22	0.10	–0.10	–0.17	–0.15	–0.17	48.7*
Favoring economic equality	–0.39	–0.14	–0.09	0.05	0.18	–0.20	0.42	110.7*
Economic solidarity	–0.06	0.04	0.02	0.00	–0.08	–0.21	0.09	8.1*
Postmaterialism	0.08	0.22	0.07	–0.07	–0.19	–0.06	–0.09	38.1*
Ethnic issues								
Ethnic intolerance	0.01	–0.11	–0.06	0.00	0.05	0.16	0.14	13.3*
Cosmopolitanism	–0.02	0.14	0.04	–0.01	–0.12	–0.17	–0.08	16.1*
Anti-immigrant attitudes	0.00	–0.24	–0.04	0.07	0.13	0.16	0.02	31.1*
Work issues								
Intrinsic work motivation	0.16	0.16	0.06	–0.04	–0.21	–0.01	–0.11	42.8*
Extrinsic work motivation	–0.27	–0.16	–0.02	0.09	0.17	–0.14	0.06	74.3*
Work ethic	0.15	–0.07	–0.05	0.06	0.06	0.27	–0.15	20.6*
Civic issues								
Political intolerance	0.04	0.12	0.05	–0.01	–0.09	–0.09	–0.09	12.9*
Protest orientation	–0.05	0.21	0.05	–0.05	–0.15	–0.14	–0.03	28.7*
Pro-democratic attitudes	0.05	0.24	0.10	–0.12	–0.21	–0.08	–0.22	57.4*

Note: Adjusted for gender, age, children, partner status, living at home, and urban residence. * $p < 0.05$

TABLE III: *MCA analysis of differences in values between educational groups. Adjusted means for the European Union in 1999*

	Primary	Secondary vocational	Secondary general	Tertiary	F-test
Moral issues					
Intolerance of deviance	–0.05	–0.03	0.05	0.09	14.8*
Egalitarian sex roles	–0.26	–0.11	0.06	0.25	134.6*
Pro-life attitudes (anti-abortion)	0.16	0.02	–0.07	–0.04	28.8*
Pro-marriage attitudes	0.21	0.12	–0.04	–0.22	113.0*
Pro-euthanasia attitudes	–0.07	–0.02	0.03	0.02	5.7*
Liberal attitudes toward soft drugs	–0.11	–0.10	0.04	0.16	57.5*
Religious issues					
Religious beliefs	0.08	0.01	–0.02	–0.05	9.3*
Separation church and state	–0.11	–0.06	0.05	0.05	16.6*
Political-economic issues					
Pro-environmentalism	–0.21	–0.11	0.02	0.22	105.1*
Favouring economic equality	0.15	0.07	–0.04	–0.11	38.5*
Economic solidarity	–0.07	–0.04	0.02	0.07	11.2*
Postmaterialism	–0.24	–0.10	0.05	0.23	112.2*
Ethnic issues					
Ethnic intolerance	0.14	0.06	–0.03	–0.14	39.4*
Cosmopolitanism	–0.16	–0.08	0.03	0.15	53.1*
Anti-immigrant attitudes	0.15	0.14	0.00	–0.29	140.6*
Work issues					
Intrinsic work motivation	–0.17	–0.05	0.01	0.17	64.5*
Extrinsic work motivation	0.16	0.08	–0.03	–0.18	69.3*
Work ethic	0.07	0.07	–0.01	–0.15	36.7*
Civic issues					
Political intolerance	–0.07	–0.05	0.01	0.12	23.3*
Protest orientation	–0.20	–0.09	0.01	0.23	104.0*
Pro-democratic attitudes	–0.24	–0.18	0.02	0.29	168.5*

Note: Adjusted for gender, age, children, partner status, living at home, and urban residence.
* $p < 0.05$.

Europe as a whole

To give a first descriptive picture of stratification and attitudes, we present MCA-analyses on a dataset in which the 22 countries are pooled. The effects of class and education are controlled for the effects of sex, age, children, living with a partner, living at home (with parents), urbanization and differences between countries. Controlling for country effects is important since countries differ widely in their educational and class composition. Because countries also have different attitudes, the effects of class and education can be biased if country differences are not taken into account. We present the adjusted means for each class and each educational group. Since the scales are standardized, these class- and education-specific means can be interpreted as deviations from the average (0). Educational differences are not controlled for class and class differences are not controlled for education. F-tests are presented to assess if educational and class effects are statistically significant. How effects

TABLE IV: *Eta-values for education, class, country, gender, and age for 21 attitudes in the European Union in 1999*

	Total Eta class	Net Eta class	Reduction (%)	Total Eta education	Net Eta education	Reduction (%)	Eta country	Eta gender	Eta age
Moral issues									
Intolerance of deviance	0.046	0.030	–35	0.054	0.043	–20	0.451	0.015	0.054
Egalitarian sex roles	0.131	0.064	–51	0.168	0.136	–19	0.358	0.140	0.082
Pro-life attitudes (anti abortion)	0.052	0.039	–25	0.080	0.077	–4	0.337	0.003	0.047
Pro-marriage attitudes	0.123	0.072	–41	0.147	0.117	–20	0.342	0.018	0.089
Pro-euthanasia attitudes	0.051	0.047	–8	0.039	0.029	–26	0.306	0.006	0.073
Liberal attitudes toward soft drugs	0.075	0.036	–52	0.104	0.090	–13	0.267	0.082	0.120
Religious issues									
Religious beliefs	0.056	0.049	–13	0.044	0.035	–20	0.461	0.109	0.033
Separation church and state	0.064	0.050	–22	0.066	0.050	–24	0.270	0.038	0.029
Political-economic issues									
Pro-environmentalism	0.142	0.094	–34	0.148	0.104	–30	0.353	0.017	0.022
Favouring economic equality	0.207	0.198	–4	0.092	0.037	–60	0.263	0.049	0.046
Economic solidarity	0.052	0.047	–10	0.050	0.051	2	0.296	0.077	0.117
Postmaterialism	0.122	0.068	–44	0.151	0.118	–22	0.294	0.040	0.020
Ethnic issues									
Ethnic intolerance	0.075	0.049	–35	0.090	0.078	–13	0.201	0.045	0.026
Cosmopolitanism	0.079	0.041	–48	0.105	0.090	–14	0.273	0.022	0.064
Anti-immigrant attitudes	0.104	0.036	–65	0.161	0.146	–9	0.329	0.005	0.033
Work issues									
Intrinsic work motivation	0.122	0.093	–24	0.112	0.075	–33	0.402	0.012	0.051
Extrinsic work motivation	0.131	0.105	–20	0.114	0.082	–28	0.366	0.009	0.053
Work ethic	0.093	0.086	–8	0.089	0.095	7	0.333	0.030	0.117
Civic issues									
Political intolerance	0.072	0.054	–25	0.066	0.046	–30	0.336	0.039	0.042
Protest orientation	0.107	0.053	–50	0.143	0.120	–16	0.278	0.092	0.044
Pro-democratic attitudes	0.162	0.095	–41	0.191	0.152	–20	0.330	0.034	0.022
Average	0.090	0.061		0.096	0.077		0.298	0.038	0.051

Note: Adjusted for gender, age, children, partner status, living at home, and urban residence.

TABLE V: *Multilevel regression of eta-values on type of stratification, characteristics of countries, and characteristics of attitudes*

Total eta-values	Model A1				Model A2				Model A3			
	Eta class		Eta education		Eta class		Eta education		Eta class		Eta education	
	b	p	b	p	b	p	b	p	b	p	b	p
Country characteristics												
GNP per capita (in 1000s)	0.326	0.03	0.631	0.00	0.300	0.03	0.624	0.00	0.318	0.03	0.611	0.00
GNP squared					–0.027	0.06	–0.007	0.71				
Service sector (%)									0.037	0.68	0.083	0.43
Former communist	3.184	0.08	6.073	0.00	3.629	0.04	6.188	0.01	3.547	0.08	6.885	0.00
Church attendance (%)	0.027	0.16	0.023	0.31	0.018	0.33	0.020	0.40	0.030	0.15	0.030	0.23
Attitude characteristics												
Moral issues (reference)	*ref.*		*ref.*		*ref.*		*ref.*		*ref.*		*ref.*	
Religious issues	–3.274	0.00	–4.971	0.00	–3.274	0.00	–4.971	0.00	–3.275	0.00	–4.973	0.00
Political-economic issues	3.850	0.00	0.681	0.45	3.850	0.00	0.680	0.45	3.850	0.00	0.680	0.45
Ethnic issues	0.737	0.36	1.353	0.16	0.741	0.36	1.354	0.16	0.737	0.36	1.352	0.16
Work issues	2.773	0.00	0.598	0.56	2.768	0.00	0.597	0.56	2.771	0.00	0.594	0.56
Civic issues	2.181	0.01	3.872	0.00	2.184	0.01	3.873	0.00	2.180	0.01	3.870	0.00
Number of items (3+ vs. 1–2)	2.665	0.00	2.878	0.00	2.664	0.00	2.877	0.00	2.664	0.00	2.875	0.00
Constant	9.394	0.00	7.957	0.00	10.496	0.00	8.244	0.00	6.813	0.28	2.199	0.77
R-square within	0.186		0.130		0.186		0.130		0.186		0.130	
R-square between	0.261		0.492		0.402		0.497		0.270		0.513	

Net eta-values	Model B1				Model B2				Model B3			
	Eta class		Eta education		Eta class		Eta education		Eta class		Eta education	
	b	p	b	p	b	p	b	p	b	p	b	p
Country characteristics												
GNP per capita (in 1000s)	–0.093	0.49	0.300	0.04	–0.097	0.49	0.322	0.02	–0.102	0.46	0.281	0.05
GNP squared					–0.004	0.80	0.023	0.11				
Service sector (%)									0.038	0.65	0.083	0.34
Former communist	–2.127	0.20	1.039	0.58	–2.067	0.24	0.654	0.71	–1.755	0.35	1.844	0.35
Church attendance (%)	–0.006	0.73	–0.009	0.64	–0.007	0.70	–0.001	0.94	–0.003	0.89	–0.002	0.94
Value characteristics												
Moral issues (reference)	*ref.*		*ref.*		*ref.*		*ref.*		*ref.*		*ref.*	
Religious issues	–1.239	0.10	–3.158	0.00	–1.239	0.10	–3.158	0.00	–1.240	0.10	–3.160	0.00
Political-economic issues	3.372	0.00	–0.667	0.33	3.372	0.00	–0.666	0.33	3.372	0.00	–0.667	0.33
Ethnic issues	0.058	0.93	1.006	0.17	0.058	0.93	1.003	0.18	0.057	0.93	1.004	0.18
Work issues	2.780	0.00	–0.108	0.89	2.778	0.00	–0.103	0.90	2.778	0.00	–0.112	0.89
Civic issues	0.178	0.78	2.398	0.00	0.178	0.78	2.396	0.00	0.178	0.78	2.396	0.00
Number of items (3+ vs. 1–2)	1.106	0.02	1.553	0.01	1.105	0.02	1.554	0.01	1.104	0.02	1.550	0.01
Constant	10.739	0.00	9.192	0.00	10.890	0.00	8.244	0.00	8.102	0.17	3.476	0.57
R-square within	0.160		0.090		0.160		0.090		0.160		0.090	
R-square between	0.140		0.492		0.144		0.570		0.152		0.522	

Note: GNP is centered. Eta's multiplied by 100. Number of observations is 453, number of countries is 22.

change when we analyse class and education simultaneously is an issue to which we return in the following section.

How do classes and educational groups differ in the attitudes they have? We start with differences between classes (Table II). When we look at attitudes towards moral issues, we first see that farmers stand out as conservative. Farmers especially have more conservative attitudes on sex roles and marriage. They are also more traditional when it comes to abortion and euthanasia. We observe that in general attitudes tend to become more liberal as we move up in the class hierarchy. Lower white-collar workers are more liberal on sex roles, marriage, and the use of soft drugs than lower blue-collar workers. Professionals are more liberal on these issues than lower white-collar workers. Managers and employers are the exception in that they take an average position on most issues (with an exception on abortion and euthanasia). As a result, the economic elite (managers and employers) is more conservative than the cultural elite (professionals).

Class differences in attitudes on religious issues are primarily a contrast between farmers and the rest. Farmers have much stronger religious beliefs than non-farmers. The professionals report the most secular opinions.

Attitudes toward political-economic issues are also stratified by class. When we look at attitudes about economic inequality, we see a more or less linear pattern, consistent with other findings. The higher the class position, the lower the support for equality. For the other scales, the direction is reversed. The higher the class position, the more support for environmental politics and the more postmaterialistic. Moreover, there is a sharp distinction here between professionals and managers. For example, managers are less in favour of environmental politics than professionals. Farmers also have a special position: they hold the same views as lower blue-collar workers about the environment and about postmaterialism, but they are highly opposed to economic redistribution by the government.

The story is also nuanced for attitudes on ethnic issues. There is a clear increase in ethnic prejudice when we move down from the professionals to the blue-collar workers, but managers are more prejudiced than professionals. Farmers are more prejudiced than lower blue-collar workers, especially when we look at attitudes toward having ethnic minority members as neighbours.

Attitudes on work are also stratified by class. When we exclude farmers, we see a more or less linear pattern. The higher the class position, the more intrinsic and the less extrinsic the work motivation becomes. The item on work ethic is driven by a distinction between managers, employers, and farmers on the one hand, and the other classes on the other hand. Managers, employers, and farmers are all characterized by a strong work ethic.

The attitudes toward civic issues, finally, show a linear pattern. The higher the class position, the more support for democratic institutions. The managers and employers are again an exception. Their attitudes are

more or less in the middle of the class spectrum rather than on the most supportive side.

Table III shows the effects of education on attitudes. Educational effects are strong, linear and present for virtually all items. To illustrate: the higher educated are more supportive of egalitarian sex roles (moral issues), they have weaker religious beliefs (religious issues), they are more postmaterialistic (political-economic issues), they say they are less opposed to immigrants (ethnic issues), they have a higher intrinsic work motivation (work issues), and they are more strongly in favour of democracy (civic issues). The college educated do not stand out, in contrast to what is sometimes suggested in the educational research literature (Hyman and Wright 1979; Pascarella and Terenzini 1991). The difference between the middle educational groups and the lowest educational group is about as large as the difference between the tertiary educated and the middle groups. Finally, we note one case where the educational effect is very small. Although the higher educated are more liberal on most moral issues, they are not generally more liberal on euthanasia.

Summarizing the effects of class and education

In Table IV, we present Eta-values for the effects of class and education for each of the 21 scales, again using the European Union as a whole. We initially expected that educational effects would be stronger than class effects. The results in Table IV do not confirm this. On average, the Eta-values for class and education are similar. However, this conclusion depends on the type of item. For attitudes on ethnic issues, educational effects are clearly stronger than class effects. For work issues and economic issues, however, class effects are somewhat stronger. We also see that moral issues are more strongly stratified by education than by class, but this conclusion is limited to specific items (sex roles, abortion, marriage, and soft drugs). For the other items, class and education have effects of similar magnitude.

To what extent are the effects of class and education interrelated? The columns of net Eta-values reveal that both educational and class effects are reduced when holding constant the effect of the other stratification characteristic. This reduction is generally stronger for the class effects.

It is however important to realize that the two types of reduction have a different causal interpretation. If one assumes that education is causally prior to class – an assumption which can be debated – one can argue that the decline of the educational effect when adding class, indicates the degree to which the educational effect is interpreted by class. Similarly, the reduction in the class effect can be argued to be the result of educational selection into classes. In other words, the class effect is to some extent *spurious*, whereas the educational effect is to some extent *interpreted*. For that reason, it seems also appropriate to compare the net effect of class with the total effect of education. In

this comparison, educational effects are stronger than class effects 18 out of the 21 attitudes. Note, however, that the reduction of the class effect may also be caused in part by internal heterogeneity of classes and by measurement error. For that reason, the choice between the two comparisons is more difficult.

How strong are the effects of class and education? When looking at the size of the total Eta-values (from the models that do not contain the competing stratification characteristic), we conclude that the effects are mostly of modest size and in some cases strong. We need to keep in mind, however, that attitude research usually yields modest R-squares (Kalmijn and Kraaykamp 1999). We can compare the class and educational effects with other lines of demarcation in society (i.e., sex and age). When we do this, we conclude that educational differences are larger than gender and generational differences. Differences between countries, however, are larger than differences between educational or class categories.

Regression analyses of country differences

The results of the multilevel analyses in which Eta-values are nested in countries are presented in Table V. For reasons of presentation we here multiplied Eta-values by 100. The top panel is based on *total* Eta-values (Models A) whereas the bottom panel is based on *net* Eta-values (Models B). We begin by discussing the random part of the models. Eta-values are nested within countries and hence, each country has its own mean Eta-value. The differences among countries are reflected in the variance of the random intercept. When estimating an empty model, we find that the differences in Eta-values among countries are statistically significant. The country variance for the net Eta-value is 3.01 ($p = 0.02$) for education and 1.39 ($p = 0.05$) for class. For the total Eta-value, the variances are 3.96 ($p = 0.03$) and 1.63 ($p = 0.10$) respectively.

Although it is interesting that there are differences in associations (Eta-values) among countries, our concern is to see with which country characteristics these differences are related. Table V shows that there is a significant positive effect of GNP on the Eta for class (Model A1). The effect of GNP on the Eta for education is also positive and statistically significant. Hence, an increase in GNP is associated with a significant increase in the degree to which attitudes are stratified. The effect of GNP clearly is stronger for the education Eta-values than for the class Eta-values. To test this difference, we pooled the two sets of Eta-values and included interaction effects of all independent variables and a variable which indicates if the Eta-value pertains to education or class. This test shows that the effect of GNP is significantly stronger for education ($Z = 2.13$, $p = 0.04$). Hence, when a society is richer, educational

differentiation in attitudes increases more strongly than class differentiation in attitudes.

We included two country-level control variables in the model. Model A1 shows that communism has a significant positive effect on attitude differentiation. Hence, educational effects on attitudes are stronger in former communist countries. This is suggestive evidence against the notion that the transition process from communism to capitalism has resulted in more ideological uncertainty (Arts, Hagenaars, and Halman 2003). The findings are more in line with the notion that cultural aspects of stratification were more important under communism (Konrád and Szelényi 1979) and that such patterns may have persisted. The degree of religiosity in a country does not have an effect on the effects of class and education.

To what extent are the effects of GNP linear? This is an important question in light of the distinction between modernization and postmodernization. To assess this, we added a quadratic term of GNP to Model A1. Model A2 shows that the effect of GNP on educational stratification is linear – the quadratic term is not significant. For class, we see a marginally significant quadratic effect. Graphic inspection, however, shows that Eta-values increase in the entire range of the GNP-values in our sample. The rate of this increase declines, however, as GNP rises.

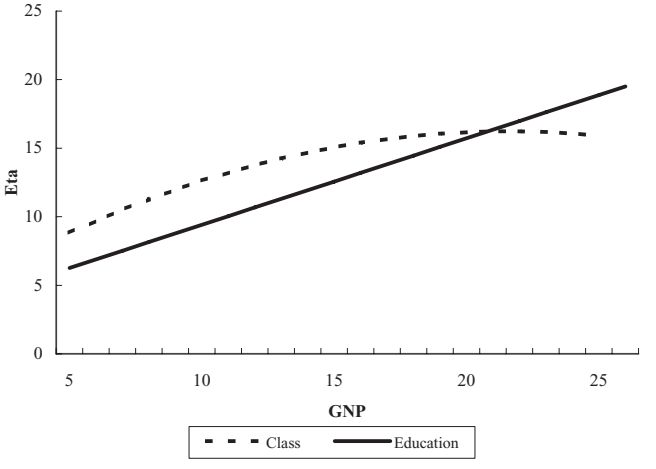
In Model A3, we add service sector employment. This is an alternative way of detecting possible non linearities in the effect of modernization. More specifically, we could expect that educational stratification is especially strong in the postmodernization phase. Such differences can be examined by looking at service sector employment, the classic indicator of this phase (Bell 1976; Inglehart and Baker 2000). The results in the top panel show that there is no significant effect of service sector employment. This applies to both the education and the class Eta's. Because the GNP and service sector variables are strongly correlated ($r = 0.76$), we also estimated a model without GNP. This model does not show a significant effect of service sector employment either.

The models also reveal differences between groups of attitudes. The dummy-variables which indicate what type of attitude the Eta refers to generally have statistically significant effects. For class, political-economic attitudes are the most differentiated. Work and civic issues are also strongly differentiated, but less than political-economic issues. Ethnic and religious issues are least differentiated. For education, we see that civic issues are the most differentiated. Somewhat less differentiated are ethnic issues, followed by work and political-economic issues.

In line with what could be expected, we also observe a small measurement effect. Scales that are measured with more than two items have higher Eta-values (about 2.5 scale points) than other scales.

In the bottom panel of Table V, we present a more stringent test of our hypothesis by focusing on the net Eta-values rather than on the total

FIGURE I: *Total Eta-values for class and education by GNP*

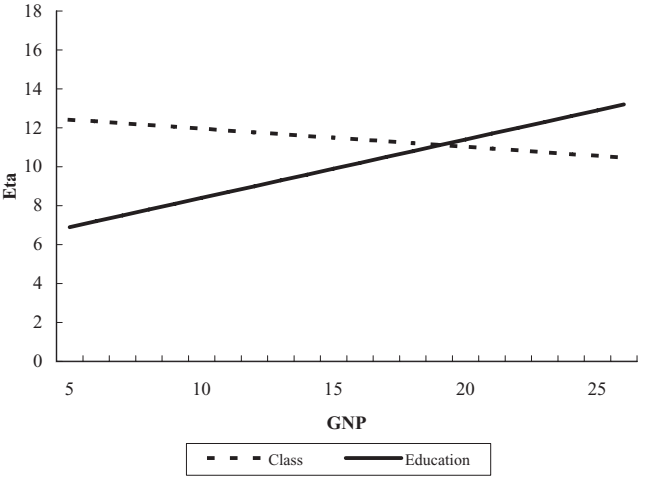


Eta-values. We see that the effect of GNP on educational differentiation is weaker but still significant (Model B1). The effect of GNP on the net Eta-values of class is not significant anymore. Hence, the positive GNP effect on class differentiation which was found earlier disappears when we partial out the role of education. The curvilinear effect observed in Model A2 also does not surface in Model B2. These analyses essentially tell a different story than the analyses of total Eta-values: Economic development is associated with educational differentiation but not with class differentiation in attitudes.

To summarize the analyses of Table V, we present the results from the regression models graphically. In Figure I, we present the total Eta-value as implied by Model A2 (for class) and Model A1 (for education), broken down by level of GNP. Figure II presents the net Eta-values (both from Model B1). In calculating the predictions, church attendance and communism were set at the mean. The (6-1) dummy-variables for attitude characteristics were set at a value of 1/6 for each dummy. Hence, the means in Figure I and II refer to the 'average' item, where the average refers to the unweighted average of the six groups of attitudes.

The figures show first that educational stratification in attitudes is stronger when the level of GNP in a country is higher. In Figure I class effects also increase, but slower and less linear. The net Eta-values in Figure II show an even stronger result. Net educational effects on attitudes increase with GNP whereas net class effects are more or less stable. It is also instructive to compare the strength of the two stratification dimensions. Class effects are greater than educational effects in less modernized countries, but class and educational effects converge. In the richest countries, educational effects end up being *stronger* than class effects. The cross-over point is at a GNP of about 19.[3]

FIGURE II: *Net Eta-values for class and education by GNP*



Conclusion and discussion

Our analyses may lead to several conclusions. First, we have established that attitudes are stratified by class and education. This is not a new conclusion, but our analysis presents a comprehensive picture of these effects and presents it for Europe. The degree of stratification in attitudes varies from item to item and can best be evaluated as modest in size and in some instances, strong. The differentiation due to class and education is generally larger than the differentiation due to generation and sex. Stratification differences within countries, however, are smaller than differences between countries. These latter distinctions are related to modernization and postmodernization and have been documented elsewhere in great detail (Arts, Hagenaars, and Halman 2003; Inglehart and Baker 2000).

Second, we compared educational differences in attitudes to class differences in attitudes. When we look at total (uncontrolled) Eta-values, the two sources of differentiation are more or less of the same magnitude. Given the causal order of the two variables, it is also useful to compare the total Eta-value for education to the net Eta-value for class (controlled for education). In this comparison, educational effects are somewhat stronger than class effects. We note however, that heterogeneity in the class categories can be related to education, in which case, the net Eta-value for class may be underestimated.

Third, and most importantly, we find that stratification in attitudes depends on the national context. Using GNP and the percentage of the population employed in the service sector as indicators of (post)modernization, we find that the higher the level of development, the *stronger* the effect of education

on attitudes. Class effects on attitudes also increase with GNP but when the role of education is partialled out, class effects are stable. As a result, in the most highly modernized modern countries like Denmark, Germany, and the Netherlands, the net effect of education ends up being more important than the net effect of class for predicting attitudes.

We conclude with a discussion of two caveats. First, we have summarized the effects of class and education. Increases in Eta-values then indicate that stratification aspects can explain more of the (residual) variance in attitudes, but they do not tell us how groups have changed vis-à-vis each other. Similarly, it is perfectly possible (although not likely) to observe similar Eta-values in two different settings while the direction of educational differences in one setting is the opposite of the direction of those differences in another setting. While this 'non-directional' approach may seem a disadvantage, it is motivated by our wish to evaluate as broad a range of attitudes as possible. If the aim is to test a simple macro-level hypothesis, it is undoable to specify hypotheses at the micro-level for class and education for each of the 21 attitudes.

A second caveat is that our comparative perspective can be expanded. First, we have looked at one well-defined region in the world, and although there is variation in GNP in Europe, this variation occurs at the higher end of the continuum. A logical next step would be to expand the comparative scope to less developed countries. This will also give an impression of how attitudes are distributed in society when few people have 'modern' attitudes. To this end, data from the World Value Studies can be used. Our design has also ignored the element of change. For testing hypotheses about modernization, cross-sectional and longitudinal designs are both valid, but an ideal design is to combine cross-country analyses with time-series analyses. In order to do this, the European Values Study conducted in several different points in time need to be made comparable, both in terms of their stratification measures and their measures of attitudes.

What do the results in this article tell us about the theoretical notions of individualization and massification? Although such theories are often not precise enough to refute, our conclusion of increasing stratification of attitudes does not concur with the notion that everyone chooses his or her own attitudes freely. We observe that most of the variance in attitudes is unexplained, but the structural component in this explanation becomes not less, but even more important in modern societies. That class effects are stable is an important refutation of the individualist perspective. Post-modern criticisms of class analysis have argued that class effects no longer exist, especially in the realm of consciousness, lifestyle and ideology (Pakulski and Waters 1996). Our analyses do not support this view when it is tested in a systematic comparative perspective.

This leaves open the question of why the educational dimension of stratification is more important for attitude differentiation in more developed

countries. Perhaps two interpretations can be suggested, an interpretation that focuses on the cognitive aspects of education and an interpretation that focuses on the status aspects of education. The first interpretation emphasizes the emergence of knowledge and cognitive skills as a resource in the stratification system. Education is a good indicator of knowledge and cognitive skills. Class is more strongly an economic indicator of stratification, especially when education is taken into account. In more developed countries, it is possible that personal skills and cognitive abilities turn out to be more uniformly distributed over educational groups. In other words, this interpretation is based on the notion that more developed countries are more meritocratic. In so far as the educational effect on attitudes is due to cognitive mechanisms, this may also imply more educational differentiation in attitudes.

The second interpretation is partly similar to the first in that it starts out with the notion that cultural resources become more important in modern society. It differs in arguing that cultural resources are more than simply cognitive resources – they are also cultural competences, knowledge, and tastes which are emphasized in institutions of higher education. Moreover, these cultural resources also serve as social boundaries in society by becoming the basis of evaluation and selection in the formation of social networks, friendships, and marriage. In other words, educational groups may have become status groups, which implies that they also become more homogeneous in their lifestyles, their life chances, and their attitudes.

(Date accepted: August 2007)

Appendix: *Operationalization of the 21 values; the European Union 1999*

	Scale items	Answer categories	Scales
Moral issues			
Intolerance of deviance	On this list are various groups of people. Could you please sort out any that you would not like to have as neighbours? a. People with a criminal record b. Heavy drinkers c. Emotionally unstable people d. People who have AIDS e. Drug addicts f. Homosexuals g. Gypsies	Not mentioned (1), mentioned (2)	Factorscores items on tolerance Hungary missing
Egalitarian sex roles	People talk about the changing roles of men and women today. For each of the following statements I read out, can you tell me how much you agree with each. a. A working mother can establish just as warm and secure a relationship with her children as a mother who does not work	Strongly agree (1), agree (2), disagree (3), strongly disagree (4)	Factorscores Austria/Great Britain/Ireland missing

Appendix: *Continued*

	Scale items	Answer categories	Scales
	b. A pre-school child is likely to suffer if his or her mother works c. A job is alright but what most women really want is a home and children d. Being a housewife is just as fulfilling as working for pay		
Pro-life attitudes (anti abortion)	Do you approve or disapprove of abortion under the following circumstances? a. Where the woman is not married b. Where a married couple does not want to have any more children	Aprove (1), disaprove (2)	Factorscores Malta missing
Pro-marriage attitudes	Please tell me for each of the following statements whether you think it can always be justified, never be justified, or something in between a. Married men/women having an affair b. Homosexuality c. Divorce d. Having casual sex	Never (1) <---> always (10)	Factorscores
Pro-euthanasia attitudes	Please tell me for each of the following statements whether you think it can always be justified, never be justified, or something in between a. Euthanasia (terminating the life of the incurably sick)	Never (1) <---> always (10)	Scale value
Liberal attitudes toward soft drugs	Please tell me for each of the following statements whether you think it can always be justified, never be justified, or something in between a. Taking the drug marijuana or hashish	Never (1) <---> always (10)	Scale value
Religious issues			
Religious beliefs	a. Which of these statements comes closest to your beliefs?	There is a personal God (1), There is some sort of spirit or life force (2), I don't really know what to think (3), I don't really think there is any sort of spirit, God or life force (4)	Factorscores. Poland/Great-Brittain missing. All items recoded between 0 and 1
	Which, if any, of the following do you believe in? b. God c. Life after death d. Hell e. Heaven f. Sin	No (1), yes (2)	
Separation church and state	How much do you agree or disagree with each of the following a. Politicians who do not believe in God are unfit for public office b. Religious leaders should not influence how people vote in elections c. It would be better for *[Country]* if more people with strong religious beliefs held public office d. Religious leaders should not influence government decisions	Strongly agree (1), agree (2), neither agree nor disagree (3), disagree (4), strongly disagree (5)	Factorscores

Appendix: *Continued*

	Scale items	Answer categories	Scales
Political-economic issues			
Pro-environmentalism	I am now going to read out some statements about the environment. For each one read out, can you tell me whether you a. I would give part of my income if I were certain that the money would be used to prevent environmental pollution b. I would agree to an increase in taxes if the extra money is used to prevent environmental pollution c. The Government has to reduce environmental pollution but it should not cost me any money	Strongly agree (1), agree (2), disagree (3), strongly disagree (4)	Factorscores
Favouring economic equality	Now I'd like you to tell me your views on various issues. How would you place your views on this scale?	a. Individuals should take more resonsibility for providing for themselves (1) <---> The state should take more responsibility to ensure that everyone is provided for (10) b. People who are unemployed should have to take any job available or lose their unemployment benefits (1) <---> People who are unemployed should have the right to refuse a job they do not want (10) c. Competition is good. It stimulates people to work hard and develop new ideas (1) <---> Competition is harmful, it brings out the worst in people (10) d. The state should give more freedom to firms (1) <---> The state should control firms more effectively (10)	Factorscores
Economic solidarity	To what extent do you feel concerned about the living conditions of a. Elderly people in your country b. Unemployed people in your country c. Immigrants in your country d. Sick and disabled people in your country	Much (1), very much (2), to a certain extent (3), not so much (4), not at all (5)	Factorscores
Postmaterialism	a. There is a lot of talk these days about what the aims of this country should be for the next ten years. On this card are listed some of the goals which different people would give top priority. If you had to choose, which of the things on this card would	Maintaining order in the nation (1), Giving people more say in important government decisions (2), Fighting rising prices (3), Protecting freedom of speech (4)	Standard scale (1–3)

Appendix: *Continued*

	Scale items	Answer categories	Scales
	b. And which would be the next most important?	Maintaining order in the nation (1), Giving people more say in important government decisions (2), Fighting rising prices (3), Protecting freedom of speech (4)	
Ethnic issues			
Ethnic intolerance	On this list are various groups of people. Could you please sort out any that you would not like to have as neighbours? a. People of a different race b. People with large families c. Muslims d. Immigrants/foreign workers e. Jews	Not mentioned (1), mentioned (2)	Factorscores. Hungary missing
Cosmopolitanism	To what extent do you feel concerned about the living conditions of a. Europeans b. Human kind	Much (1), very much (2), to a certain extent (3), not so much (4), not at all (5)	Factorscores
Anti-immigrant attitudes	a. How about people from less developed countries coming here to work. Which one of the following do you think the government should do?	Let anyone come who wants to (1), Let people come as long as there are jobs available (2), Put strict limits on the number of foreigners who can come here (3), Prohibit people coming here from other countries (4)	Factorscores All items recoded between 0 and 1
	b. Which of these statements is the nearest to your opinion?	For the greater good of society it is better if immigrants maintain their distinct customs and traditions (1), For the greater good of society it is better if immigrants do not maintain their distinct customs and traditions but take over the customs of the country	
	Do you agree or disagree with the following statements? c. When jobs are scarce, employers should give priority to *[country]* people over immigrants	Agree (1), disagree (2), neither (3)	
Work issues			
Intrinsic work motivation	Here are some aspects of a job that people say are important. Please look at them and tell me which ones you personally think are important in a job? a. Pleasant people to work with b. Good chances for promotion c. A job respected by people in general d. An opportunity to use initiative e. A useful job for society f. Meeting people	Not mentioned (1), mentioned (2)	Factorscores items on work motivation

Appendix: *Continued*

	Scale items	Answer categories	Scales
	g. A job in which you feel you can achieve something h. A responsible job i. A job that is interesting j. A job that meets one's abilities		
Extrinsic work motivation	Here are some aspects of a job that people say are important. Please look at them and tell me which ones you personally think are important in a job? a. Good pay b. Not too much pressure c. Good job security d. Good hours e. Generous holidays	Not mentioned (1), mentioned (2)	Factorscores items on work motivation
Work ethic	Do you agree or disagree with the following statements? a. To fully develop your talents, you need to have a job b. It is humiliating to receive money without having to work for it c. People who don't work turn lazy d. Work is a duty towards society e. Work should always come first, even if it means less spare time	Strongly agree (1), agree (2), neither agree nor disagree (3), disagree (4), strongly disagree (5)	Factorscores Austria missing
Civic issues			
Political intolerance	On this list are various groups of people. Could you please sort out any that you would not like to have as neighbours? a. Left-wing extremists b. Right-wing extremists	Not mentioned (1), mentioned (2)	Factorscores. Hungary missing
Protest orientation	I'm going to read out some different forms of political action that people can take, and I'd like you to tell me, for each one, whether you have actually done any of these things, whether you might do it or would never, under any circumstances, do it. a. Signing a petition b. Joining in boycotts c. Attending lawful demonstrations d. Joining unofficial strikes e. Occupying buildings or factories	Have done (1), might do (2), would never do (3)	Factorscores
Pro-democratic attitudes	I'm going to read off some things that people sometimes say about a democratic political system. Could you please tell me if you a. Democracy may have problems but it's better than any other form of government b. In democracy, the economic system runs badly c. Democracies are indecisive and have too much squabbling d. Democracies aren't good at maintaining order	Strongly agree (1), agree (2), disagree (3), strongly disagree (4)	Factorscores

Note: Don't know set on item mean and don't answer is set on system missing, items are recoded in the right direction.

Notes

1. The authors like to thank Wil Arts, Harry Ganzeboom, Ruud Luijkx, Loek Halman and reviewers for comments and Ruud Luijkx for useful advice about our analyses.

2. Note that Eta is not the same as the sum or average of the class or educational differences in attitudes (Pierce, Block, and Aguinis 2004). It is a measure of the explained variance that is due to class or education, and therefore it is also sensitive to the relative sizes of the categories. For example, if an elite category has very different attitudes, this will have little effect on the Eta if the elite is a very small group.

3. We checked if the effects of GNP are different for different attitudes. Only one interaction stands out: The effect of GNP on the Eta-values of education is significantly weaker for religious issues.

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